

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (amended) A method of quantitatively evaluating alternatives to check-out operations using simulation model, comprising:

selecting from a data input dictionary parameters describing a first check-out operations;

inputting parameter values for the selected parameters describing the first check-out operations into the simulation model;

~~running the simulation model~~ transforming the first check-out operation parameters into check-out performance results; and

outputting the results from the simulation model.

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Claim 2. (canceled)

Claim 3. (amended) The method of claim 1, wherein the ~~simulation model~~ first check-out operations includes one of a transaction process at two front facing check stands, a transaction process at two back-to-back check stands and a transaction process at two front facing check stands for fast-track customers.

Claim 4. (amended) The method of claim 1, wherein the first check-out operations include check stand designs, transaction procedures and lane configurations.

Claim 5. (amended) The method of claim 1, wherein the ~~running~~ transforming step is performed in either an unlimited arrival mode ~~and~~ or a limited arrival mode.

Claim 6. (amended) The method of claim 1, wherein the simulation model simulates two lane models using check-out operations parameters ~~representing~~ describing the following events: pre-itemization, itemization, finalization, bagging and intervention.

Claim 7. (amended) The method of claim 1, wherein the ~~simulation model~~ first check-out operations ~~represents~~ represent front-end operations of a check-out process.

Claim 8. (original) The method of claim 7, wherein the front-end operations has labor including cashiers, baggers, super-helpers and overflow resources.

Claim 9. (amended) The method of claim 1, wherein the first check-out operations parameters ~~are divided into~~ comprise a configuration category, a customer demand category, a schedule category, a transaction category, a transaction itemization category, a transaction finalization category, a transaction bagging category, a transaction intervention category, and a model parameters category.

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Claim 10. (amended) The method of claim 9, wherein the configuration category includes parameters defining the length of and resources in a scenario.

Claim 11. (original) The method of claim 10, wherein the resources include a number and type of check-stands and belt size.

Claim 12. (original) The method of claim 9, wherein the customer demand category has parameters that control the workload on a front-end or lane.

Claim 13. (original) The method of claim 12, wherein the parameters that control the workload include a number of customer arrivals and customer basket sizes.

Claim 14. (original) The method of claim 9, wherein the schedules category includes schedules for cashier, bagger and super-helper in 30 minute intervals during a scenario.

Claim 15. (original) The method of claim 9, wherein the transaction itemization parameters are scalar values.

Claim 16. (original) The method of claim 15, wherein the scalar parameters are a mean and a standard event time distribution of an event time distribution.

Claim 17. (original) The method of claim 9, wherein the transaction bagging category includes parameters which govern how long it takes to bag items and which resources are available for bagging.

Claim 18. (original) The method of claim 9, wherein the model parameters include a number of replications, a stream number identifier and check input option identifier.

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Claim 19. (canceled)

Claim 20. (amended) The method of claim 1, wherein the ~~input~~ data input dictionary comprises at least one allowable range of parameter values, and wherein the inputting step comprises inputting a parameter ~~include a value and a~~ within the allowed range.

Claim 21. (original) The method of claim 1, comprising one of outputting a report and displaying an animation of the results of the simulation.

Claim 22. (amended) The method of claim 1, further comprising: ~~repeating said running step and step said outputting step~~

selecting from a data input dictionary parameters describing a second check-out operations;

inputting parameter values for the selected parameters describing the second check-out operations into the simulation model;

transforming the second check-out operations parameters into alternative check-out performance results; and

outputting the alternative results from the simulation model.

Claim 23. (amended) The method of claim 1, wherein the first check-out operations comprise a plurality of resource types, and wherein the results of said outputting step includes performance ~~measurements~~ measures for each type of resource.

Claim 24. (amended) The method of claim 23, wherein the first check-out operations comprise a front-end model and wherein the output results include one of: all measures; baggers; cashiers; regular lanes; fast-track lanes; self-service lanes, self service convertible to cashier operated lanes, overall front-end; super-helpers; and express lanes.

Claim 25. (amended) The method of claim 23, wherein the first check-out operations comprise a two lane model and wherein the output results include one of: all measures; customer; cashier; lane; and bagger.

Claim 26. (amended) The method of claim 23, wherein the performance measures include an average, standard error, a minimum and a maximum value for each performance ~~measurement~~ measure.

Claim 27. (new) A method of predicting, with a simulation model programmed to accept parameters within a predetermined range, performance characteristics of a prospective check-out system for use in planning and designing a check-out system comprising:

selecting a check-out configuration;

determining parameters within the predetermined range that describe the check-out configuration;

inputting the parameters describing the checkout configuration into the simulation model;

determining parameters within the predetermined range that describe customer demand;

inputting the parameters describing the customer demand into the simulation model;

transforming the customer demand parameters and the check-out configuration parameters into checkout configuration performance; and

outputting information regarding the checkout configuration performance from the simulation model.

Claim 28. (new) The method of claim 27, wherein the check-out configuration comprises a plurality of check stands, and wherein the step of determining parameters describing the checkout configuration comprises the step of:

determining for each of the plurality of check stands, at least one parameter that describes the check stand, and wherein the step of inputting the parameters describing the checkout configuration into the simulation model comprises the step of:

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inputting the at least one parameter that describes the check stand for each of the plurality of check stands, and wherein the step of transforming comprises the step of:

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transforming the customer demand parameters and the check-out configuration parameters into check stand performance for each of the plurality of check stands, and wherein the step of outputting information comprises the step of:

outputting information regarding the checkout configuration performance for each of the plurality of check stands, such that a comparison of the relative performance of each of the plurality of check stands is facilitated.

Claim 29. (new) The method of claim 28, wherein each of the plurality of check stands comprises a check stand of a different type, and wherein the step of outputting information comprises the step of:

outputting information regarding the checkout configuration performance for each type of the plurality of check stands, such that a comparison of the relative performance of each type of the plurality of check stands is facilitated.

Claim 30. (new) The method of claim 27, wherein the check-out configuration comprises a plurality of labor types, and wherein the step of determining parameters describing the checkout configuration comprises the step of:

determining for each of the plurality of labor types, at least one parameter that describes the labor type, and wherein the step of inputting the parameters describing the checkout configuration into the simulation model comprises the step of:

inputting the at least one parameter that describes the labor type for each of the plurality of labor types, and wherein the step of transforming comprises the step of:

transforming the customer demand parameters and the check-out configuration parameters into labor type performance for each of the plurality of labor types, and wherein the step of outputting information comprises the step of:

outputting information regarding the checkout configuration performance for each of the plurality of labor types, such that a comparison of the relative performance of each of the plurality of labor types is facilitated.

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Claim 31. (new) The method of claim 30, wherein the plurality of labor types comprise cashiers, baggers and super-helpers, and wherein the step of outputting information comprises the step of:

outputting information regarding the checkout configuration performance for cashiers, baggers and super-helpers, such that a comparison of the relative performance of the cashiers, baggers and super-helpers is facilitated.

Claim 32. (new) A system for predicting performance characteristics of a prospective check-out system for use in planning and designing a check-out system comprising;

a computer having a microprocessor;

an input device operatively connected to the microprocessor; and

a display device operably connected to the microprocessor, wherein the microprocessor is programmed to;

receive parameters from the input describing the checkout configuration;

receive parameters from the input describing customer demand;

transform the customer demand parameters and the check-out
configuration parameters into checkout configuration performance; and
output information regarding the checkout configuration performance to
the display.

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